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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/683,356	12/18/2001	Yanping Qiu	3774	7328

23699 7590 02/22/2006

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EXAMINER

JOHNSON, JERROLD D

ART UNIT	PAPER NUMBER
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3728

DATE MAILED: 02/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/683,356	Applicant(s) QIU ET AL.	
	Examiner Jerrold Johnson	Art Unit 3728	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 18 January 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 14-17, 24 and 25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 14-16 is/are allowed.
- 6) ☒ Claim(s) 17, 24 and 25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

The drawings objection under 37 CFR 1.83(a) is withdrawn.

Claim Rejections - 35 USC § 103

and 25 are
Claims 17, ~~18~~ ¹⁹ is rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka JP 7276543 and Examiner Official Notice.

Re claim 17, Tanaka discloses the claimed invention in Figs. 9, 11, and 13 of a corner post comprising a hollow paper tubes with insertable reinforcing tubes having a circular cross section disposed within the hollow interior of the corner post, the reinforcing tubes being attached to the outer and inner walls of the corner post with adhesive.

Tanaka does not explicitly disclose the reinforcing tubes being the same length as the corner post, but does show the reinforcing tubes being flush with the axial end of at least one of the two ends of the corner post in Figs. 9, 11, and 13.

Despite the absence of an explicit disclosure in Tanaka, it would have been obvious to one of ordinary skill in the art to modify the corner post of Tanaka by having the reinforcing tubes being the same length as the corner post. Cutting the reinforcing tubes to the same length as the corner post makes for easier assembly, as no special

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positioning needs to be performed. Additionally, were the reinforcing tubes of a shorter length, there would be portions of the corner posts that would have less lateral resistance than those sections where the reinforcing tubes extend through the corner post. And as lateral resistance and the attendant cushioning is the primary objective of corner posts. A secondary objective of corner posts is providing axial rigidity to the box within which they are used. It would also be obvious to extend the reinforcing tubes the entire length of the corner post so as to contribute to the axial strength of the corner posts.

Tabuchi JP 11059733 provides extrinsic evidence of the benefits of reinforcing tubes extending to be flush with the opposite ends of a corner posts assembly comprising two interrupted corner post sections 4 and three reinforcing tubes 3.

Tanaka also does not disclose that the outside diameter of the reinforcing tubes is less than the distance between the outer and inner walls of the corner post, thereby causing the reinforcing tubes to be held in place by the outer and inner walls. Tanaka instead uses adhesive.

The claim limitation refers to what is known as an interference fit between the reinforcing tube and the cavity within the outer and inner walls of the corner post. An interference fit is an art recognized equivalent to the use of adhesives in this, as in many mechanical, environments. Interference fits obviate the need for adhesives, allowing for a minimum of air quality concerns, and minimizing clean up.

Accordingly, it would have been obvious to one of ordinary skill in the art to use an interference fit to hold the reinforcing tube within the corner post instead of adhesive.

Re claim 25, claim 25 sets forth a product-by-process limitation of the structure of the corner post.

Applicant is reminded that claims having product-by-process limitations are not limited by the process steps, and are only limited by the structure implied by those process steps. What is implied is a corner post within which a reinforcing tube is disposed in an interference fit. Such a structure is set forth in the rejection of claim 17.

Claims 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka JP 7276543, Applicant's Admitted Prior Art (Fig. 1) and Examiner Official Notice.

Tanaka again discloses the use of reinforcing tubes within corner support posts. As was set forth above, the Examiner takes Official Notice of the obviousness of making the corner support posts and the reinforcing tubes.

Tanaka does not disclose the integral inwardly extending bead or the wedging in (an interference fit) of the reinforcing tubes between the bead and one of the rounded ends of the support post. Tanaka does disclose adhesives to secure the reinforcing tubes within the corner post, and as was previously set forth, an interference fit is an art recognized equivalent to the use of adhesives in this application and would be obvious to one of ordinary skill in the art.

Applicant's Admitted Prior Art Fig. 1, shows a common corner post shape having an integrally formed inwardly extending bead. No reinforcing tube is disposed within the corner post.

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However, one of ordinary skill in the art would recognize the benefits of using a reinforcing tube and corner support post combination of Tanaka within the corner support post of AAPA or in other corner support posts that include a longitudinal cavity within which a reinforcing tube can easily be disposed to further strengthen the corner post.

Allowable Subject Matter

Claims 14-16 are allowed.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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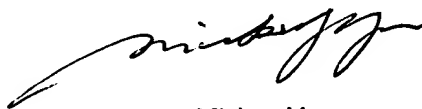
the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jerrold Johnson whose telephone number is 571-272-7141. The examiner can normally be reached on 9:30 to 6:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mickey Yu can be reached on 571-272-4562. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JDJ



Mickey Yu
Supervisory Patent Examiner
Group 3700